

### **REMARKS**

Claims 1-18 are pending in this application. Claims 1-5 and 10-14 were previously rejected and claims 6-9 and 15-18 were objected to. In light of the amendments and remarks set forth below, Applicants respectfully submit that each of the pending claims is in immediate condition for allowance.

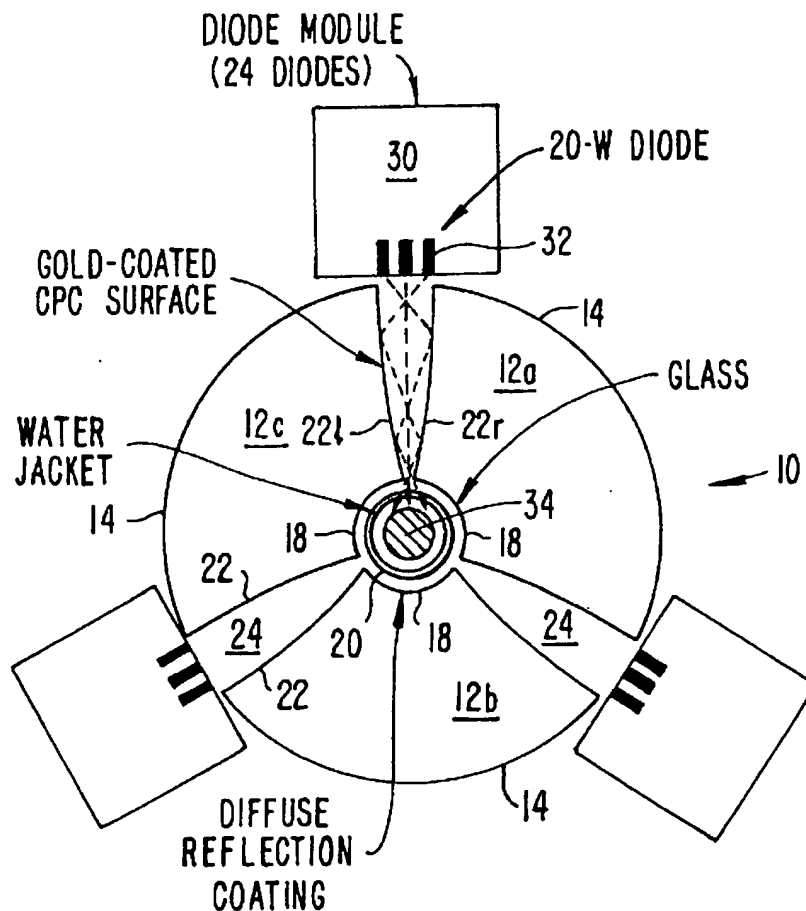
As amended, claims 1 and 10 explicitly recite a cooling tube to cool said laser rod with the use of flowing water, said cooling tube provided with an anti-reflection area for pumping light on a portion of an outer surface thereof and a high reflection area for pumping light on another portion of the outer surface on which said anti-reflection area is absent, wherein the antireflection area is not a hole through the cooling tube.

As should be noted, the claim explicitly recites that the cooling tube has two distinct areas, an anti-reflection area and a high reflection area. These two distinct areas are provided on the cooling tube and, specifically, the anti-reflection area is not a hole through the cooling tube. These two distinct areas are not present in US. Patent No. 5,978,407 ("Chang").

In the Advisory Action mailed July 24, 2006, it is asserted that Chang shows and discloses a cooling tube provided with an anti-reflection area (Fig. 2: 24) (col. 3: 44-45, pumping light channel) (col. 4: 35-40) for pumping light on a portion of said outer surface thereof (Fig. 4A: 28,b) and with a high reflection area for the pumping light on another portion of the outer surface on which said antireflection area is absent (Fig. 2: 34, 24, 22) (Figs. 5A-6B) (col. 4: 63-67). Applicants respectfully disagree that the cited portions of Chang disclose Applicants' explicitly recited invention.

In Chang, a laser pumping structure 10 is disclosed. As shown in Figure 2 reproduced below, a diode module injects laser diode light into a light concentrator channel 24. The surface of the light concentrator channel is a gold coated compound

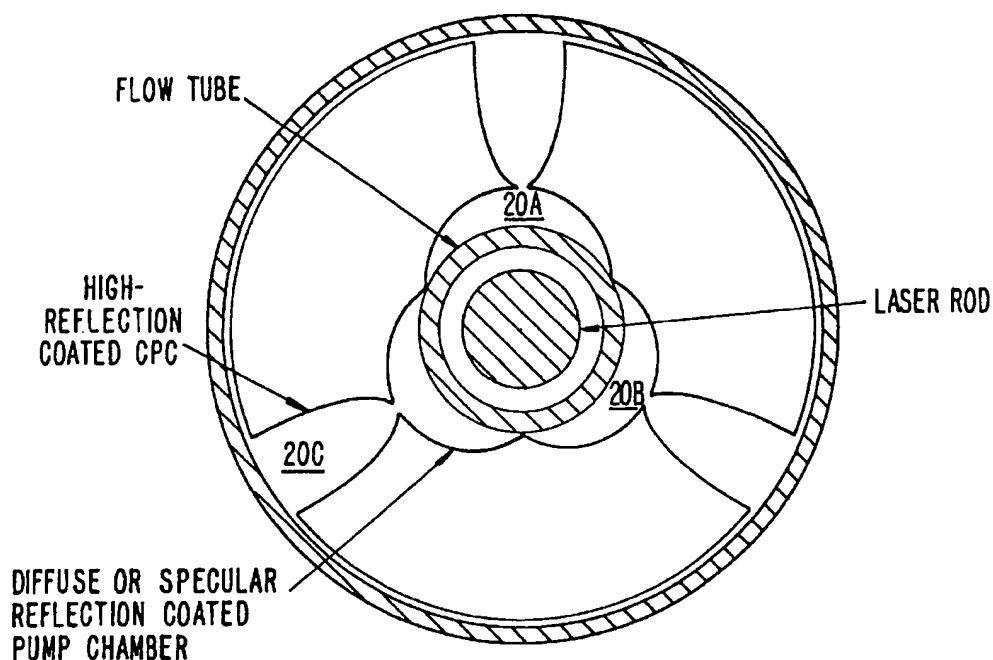
parabolic concentrator (CPC) surface. As shown, the light concentrator channel 24 has an output slot of a designated width. The concentrated laser light is then transmitted through the water jacket to the laser rod.



**FIG. 2.**

Figure 6A, reproduced below, depicts another embodiment of the invention showing the high reflection CPC channel, 20C, and the flow tube and laser rod. As shown, there is no coating on the flow tube, only the high reflection coated CPC and diffuse or specular reflection coating pump chamber. It should be noted that in both of

these embodiments, the water jacket or flow tube corresponds to Applicants' explicitly recited cooling tube. Neither of these two embodiments discloses Applicants' explicitly recited invention. The pump radiation coupling structure 10 shown in Figure 2 and Figure 6A fails to disclose a cooling tube with an antireflection area on a portion of an outer surface thereof and a high reflection area for pumping light on another portion of the outer surface on which said antireflection area is absent as well as the antireflection area not being an aperture. In both embodiments as shown and discussed above, the coupling structure 10 concentrates the laser light using a high reflection gold coated CPC surface. However, the light concentrator channels terminate in a slot. Thus, the light concentrator channels are holes through the coupling structure and Applicants' explicitly recited invention is not disclosed by Chang.



**FIG. 6A.**

Applicants have responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

Dated: August 8, 2006

Respectfully submitted,

By

Ian R. Blum

Registration No.: 42,336  
DICKSTEIN SHAPIRO LLP  
1177 Avenue of the Americas  
New York, New York 10036-2714  
(212) 277-6500  
Attorney for Applicants

IRB/mgs